# Intelligence

Three Theories

Intelligence

- Definition: The ability to understand complex ideas, learn from experience and engage in reasoning. (American Psychological Association)

Intelligence Quotient
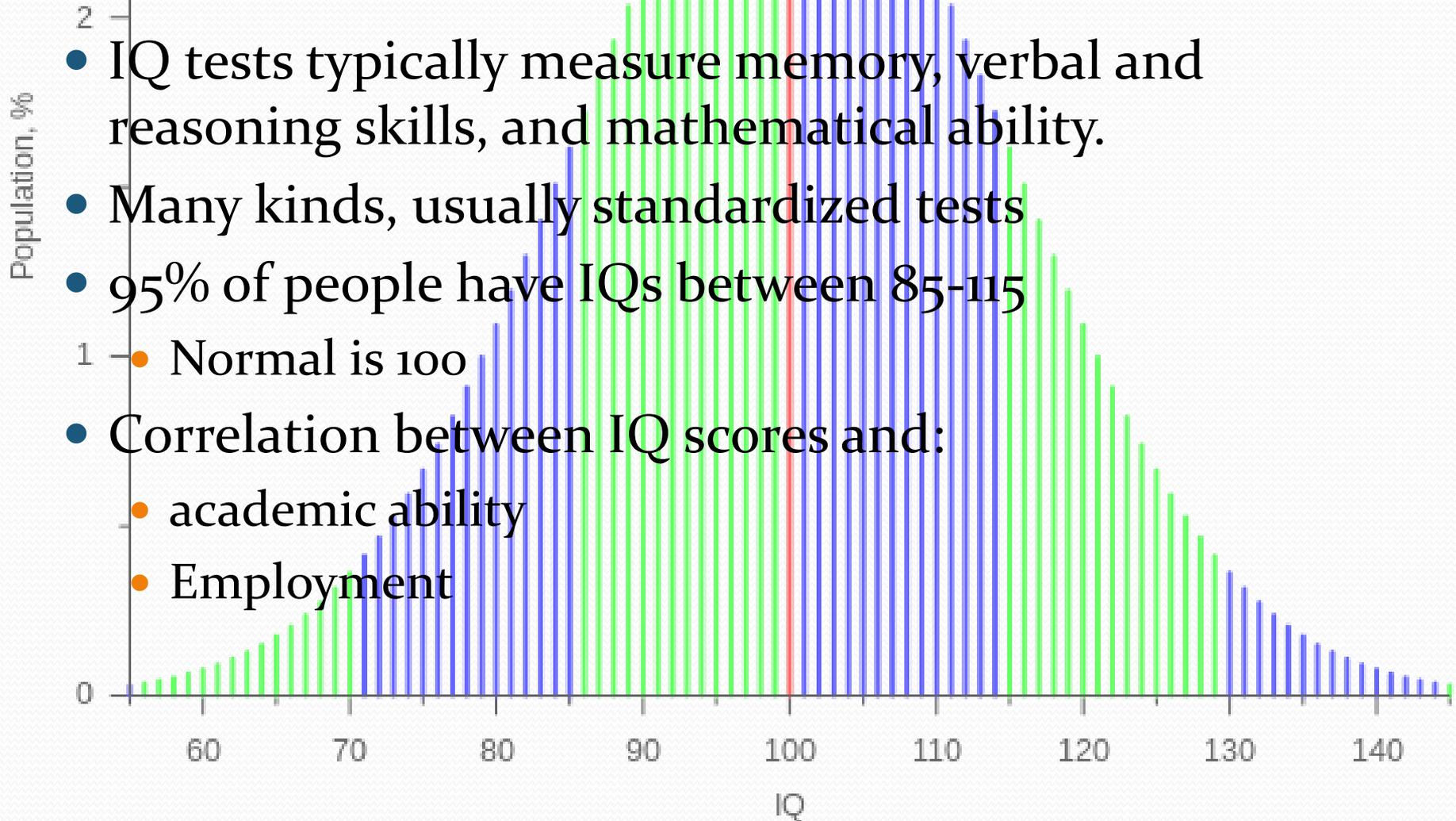
- IQ tests typically measure memory, verbal and reasoning skills, and mathematical ability.
- Many kinds, usually standardized tests
- 95% of people have IQs between 85-115
  - Normal is 100
- Correlation between IQ scores and:
  - academic ability
  - Employment

Average IQ and Accomplishments

Education (academic ability)

- Master's Degrees and PhDs
  - 125
- College graduates
  - 112-115
- High school graduates
  - 97-100
- 1-3 years of high school
  - 90-95

Occupation (employment)

- Professional and technical occupations
  - 112
- Managers and administrators
  - 104
- Clerical workers, sales workers, skilled workers
  - 101
- Unskilled workers
  - 87

The History of Intelligence and Testing

- Intelligence was first thought of as verbal and mathematical ability
  - The earliest intelligence test is a Chinese puzzle called Tangram (1000 CE)
  - Part of the Chinese imperial exam system
- Early 1900s
  - Binet-Simon Test was used to assess mental retardation in school children
    - What is normal for a child of that age?
- During WWI
  - US Army needed to evaluate the mental ability of soldiers
- Howard Gardner's Multiple Intelligences
 - Many areas of intelligence, not just academic intelligences
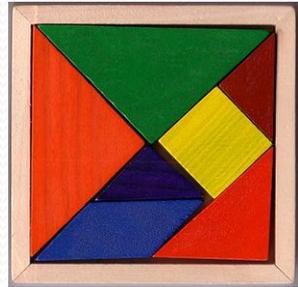
Gardner's Multiple Intelligences

- Linguistic – reading, writing, speaking
- Logical-Mathematics – math, number sense, problem-solving
- Spatial/Visual – art, mazes, maps, graphs
- Musical – instrumental ability, reading music, recognizing timbre
- Kinesthetic – coordination, easily learn sports
- Interpersonal – relating to others, being a teammate, belonging to groups
- Intrapersonal – knowing about yourself, strengths and weaknesses
- *Naturalistic – knowledge of plants and animals

PASS Theory

- Planning (frontal lobe)
  - Conscious processes of organization and strategizing
- Attention
  - Focusing on stimuli in the environment
- Simultaneous processing
  - Organizing schemata to interpret a lot of data at the same time
- Successive processing
  - Organizing schemata so that we can remember things in a sequence: 720-475-0775
- Cognitive Assessment System
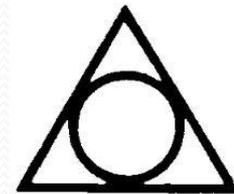
Which theory is best?

- IQ
- Multiple Intelligences
- PASS theory

References

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- Kaufman, Alan S. (2009). *IQ Testing 101*. New York (NY): Springer Publishing.

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